MCAT

FULL LENGTH PAPER–2

AS PER UHS PATTERN

Total MCQs: 220
Max. Marks: 1100 **Time Allowed: 150 Minute**

PHYSICS

Q.1 Which of following definition is correct and use only quantities rather then unit
A) Density is mass per cubic meter
B) Potential difference is energy per unit time
C) Pressure is force per unit area
D) Speed is distance per second

Q.2 Dimensionless quantity
A) Does not exist
B) all way has a unit
C) Never has unit
D) may has unit

Q.3 If three forces acting on a point can be represented in magnitude and direction by the three sides of a triangle taken in order, then the forces are said to be in
A) Equilibrium
B) Non-equilibrium
C) Translational equilibrium
D) Dynamic equilibrium

Q.4 The arm of a couple is
A) any distance between the forces
B) the distance between points of application of forces of couple
C) perpendicular distance between the two forces
D) the longest distance between the two forces.

Q.5 Which element is used to treat thyroid glands
A) Phosphorus – 32
B) Strontium – 90
C) Iodine – 131
D) None

Q.6 The energy absorbed by a man of mass 80kg who receive a does of 400 rem and its RBE factor is 10
A) 32J
B) 40 Gy
C) 0.4 SV
D) 40 SV

Q.7 Real and apparent weight become equal in
A) Inertial frames
B) Static frames
C) Frames moving with uniform velocities
D) All are correct

Q.8 A narrow intense beam of laser can be used to
A) Weld detached retina of eye
B) Holography (to produce 3D images)
C) Induce fusion reaction
D) All of these

Q.9 In Helium – neon – laser the red light of wavelength emitted is
A) 600 nm
B) 632 pm
C) 632.8nm
D) All of these

Q.10 The inner shell transition in atoms of large atomic number produces
A) γ-rays
B) Visible rays
C) Characteristics x–rays
D) All of these

Q.11 The continuous x-ray spectrum is obtained due to
A) Acceleration of impacting electron
B) Deceleration of impacting electron
C) Acceleration of targeted electron
D) Deceleration of targeted electron

Q.12 In CAT-Scanner the x-ray source produce a
A) Straight beam
B) Straight and narrow beam
C) Fan-shaped beam
D) Any one can produce

Q.13 The intensity of γ-radiation in solid materials (μ is linear absorption coefficient of the solid and x is the distance traveled) is
A) $I = I_o e^{-\mu / x}$
B) $I = I_o e^{\mu x}$
C) $I = I_o e^{-\mu x}$
D) $I = I_o e^{-x / \mu}$

Q.14 By using CAT we can detect density difference of the order of
A) 1%
B) 2%
C) 3%
D) 4%

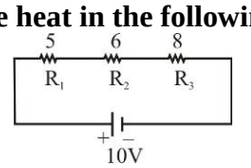
Q.15 Frequency of second pendulum is 0.5 Hz on earth. Its frequency in a satellite revolving around earth is

A) 0.5Hz
B) zero
C) infinite
D) 2Hz

Q.16 Light roofs are blown off during wind storm because wind storm produces

A) high pressure inside
B) low pressure inside
C) high pressure out side
D) low pressure out side

Q.17 Which resistor dissipate more heat in the following diagram

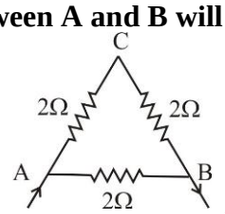


A) R_1
B) R_2
C) R_3
D) All dissipate equal heat

Q.18 You are in a moving lift and your weight become zero this means lift is moving

A) upward with acceleration g
B) down ward with acceleration g
C) both a and b are correct
D) lift is at rest

Q.19 The equivalent resistance between A and B will be



A) 3/4
B) 1
C) 4/3
D) 3/2

Q.20 Two capacitors C_1 and C_2 are connected in parallel. If a charge Q is given to the combination, the capacitors get charged. Then the ratio of charges on C_1 to charge on C_2 is

A) $1/C_1 C_2$
B) C_1C_2
C) C_2/C_1
D) C_1/C_2

Q.21 The work done by the system is 200 J while 300 J heat energy is added into it. The change in internal energy is

A) -100 J
B) + 100 J
C) 0 J
D) 300 J

Q.22 If a wire in stretched to double of its length, then the resistance of the wire will become

A) 2 times
B) 3 times
C) 4 times
D) 5 times

Q.23 If Vr.m.s value is doubled, then the temperature of an ideal gas will become

A) 2 times
B) 3 times
C) 4 times
D) 5 times

Q.24 The light used for data transmission in fibre optics has typical wavelength of

A) 1.2 μm
B) 1.2 nm
C) 1.3 μm
D) 1.5 nm

Q.25 In isothermal process which of the following is not true

A) Temperature remain constant
B) Internal energy does not change
C) No heat enter or leave the system
D) None of these

Q.26 In CRO, electron is accelerated with constant acceleration which is given as

A) eE/m
B) e/mE
C) m/eE
D) mE/e

Q.27 How many NAND gates combine to form AND gate

A) 3
B) 2
C) 4
D) None of these

Q.28 High carbon steel is example of

A) Plasticity
B) Brittle
C) Ductile
D) All of these

Q.29 The energy stored in deformed material is calculated by the graph of force extension upto the proportional limit is

A) $\frac{1}{2} l_1 \times F_1$
B) $F_1 \times l_1$
C) $\frac{1}{2} \frac{EA\ L^2}{l_1}$
D) $\frac{1}{2} \frac{EAl_1}{L^2}$

Q.30 Torque in rotational motion is given by

A) $\tau = I\alpha$
B) $\tau = a\alpha$
C) $\tau = \nu\omega$
D) none

Q.31 Least distance of distinct vision _____ with increase of age

A) Increases
B) Decreases
C) Remains constant
D) None of these

Q.32 Half life of Uranium-238 is

A) 4.5×10^9 yrs
B) 4.5×10^5 yrs
C) 4.5×10^6 yrs
D) 45×10^4 sec

Q.33 Optically active substances are those which

A) Produce polarized light
B) Rotate the plane polarized light
C) Produce double refraction
D) Convert plane polarized light into circularly polarized light

Q.34 The speed of sound waves having 256Hz compared with speed of sound having frequency 512Hz

A) half
B) twice
C) four time
D) same

Q.35 Which type of wave is used in submarine navigation system

A) Transverse
B) Longitudinal
C) Both
D) None

Q.36 What will be the relation if a source is moving away from stationary observer with speed u_s

A) $\left(\frac{v+u_s}{v}\right)f$
B) $\left(\frac{v-u_s}{v}\right)f$
C) $\left(\frac{v}{v-u_s}\right)f$
D) $\left(\frac{v}{v+u_s}\right)f$

Q.37 A body executing SHM with amplitude x_o then its K.E at any point can be found by expression

A) $\frac{1}{2}Kx_0^2$
B) $\frac{1}{2}Kx^2$
C) $\frac{1}{2}K\left(x_0^2 - x^2\right)$
D) None of these

Q.38 The speed of efflux of a liquid is

A) $\sqrt{2gh}$
B) $\sqrt{9g}$
C) $\sqrt{\rho gh}$
D) $\sqrt{\frac{2h}{g}}$

Q.39 Unit of $1/2\rho V^2$ is

A) Nm^{-2}
B) Joule
C) Watt
D) Volt

Q.40 The viscosity of an ideal fluid is

A) Zero
B) Constant
C) Infinity
D) Maximum

Q.41 The escape velocity for a planet is v_o. A particle is projected from its surface with a speed u, for this particle to move as a satellite around the planet $\frac{u}{v_o}$ = …….

A) $\sqrt{2gR}$
B) $\frac{1}{\sqrt{2}}$
C) $\sqrt{\rho R}$
D) $\sqrt{2}$

Q.42 The resistance of wire R. It is cut into two equal parts and are bundled side by side. The resistance of bundle is

A) R
B) R/2
C) R/4
D) none of this

Q.43 By using dimensional analysis we can tell about

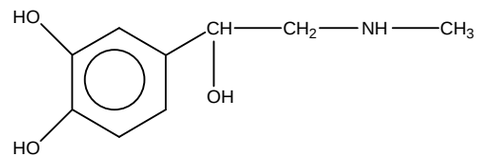
A) The constant of equation
B) Variables of the equation
C) Correctness of an equation
D) None of these

Q.44 The dimension of torsional constant 'c'

A) ML^2T^{-2}
B) ML^3T^{-3}
C) ML^2T^{-4}
D) $ML^{-2}T^{-3}$

CHEMISTRY

Q.45 The pair of optically active compounds is

(1) $H_2N - CH_2 - COOH$
(2) $HOOC - CH_2 - COOH$
(3) $H_3C - CH(OH)COOH$
(4) 

A) 1 and 2
B) 2 and 3
C) 3 and 4
D) 1 and 4

Q.46 The compound having only secondary hydrogen atoms is

A) Isobutane
B) Cyclohexane
C) 2,3-dimethylbutene
D) Propene

Q.47 Under which of the following toluene shows side chain substitution reaction

A) Cl_2 in presence of UV light
B) CH_3COCl in presence of $AlCl_3$
C) Cl_2 in presence of $AlCl_3$
D) Hydrogen in presence of $FeCl_3$

Q.48 In Nitration of benzene NO_2^+ is the attacking electrophile. It is produced by

A) Conc. HNO_3 + Conc. H_2SO_4
B) Conc. HNO_3 + Dil. H_2SO_4
C) Dil. HNO_3 + Dil. H_2SO_4
D) Dil. HNO_3 + Conc. H_2SO_4

Q.49 In the following sequence of reactions

$$CH_2CH_2CH_2Br \xrightarrow{KOH(atc.)} (A) \xrightarrow{HBr} (B) \xrightarrow{KOH(aq.)} (C)$$

The product (C) is

A) Propene
B) Propyne
C) Propan-1-ol
D) Propan-2-ol

Q.50 S_N^1 reaction is faster in

A) CH_3CH_2Cl
B) $(CH_3)_2CH\text{-}Cl$
C) $CH_3\text{-}C(CH_3)_2\text{-}Cl$
D) $CH_3\text{-}CH(CH_2CH_3)\text{-}Cl$

Q.51 2,2,4-Trimethyl penta-1-ol is

A) Primary alcohol
B) Tertiary alcohol
C) Secondary alcohol
D) None of these

Q.52 An organic compound 'X' on treatment with acidified $K_2Cr_2O_7$ gives a compound 'Y' which reacts with I_2 and sodium carbonate to form tri-iodomethane. The compound 'X' is

A) CH_3OH
B) CH_3COCH_3
C) CH_3CHO
D) $CH_3CHOHCH_3$

Q.53 Absolute ethyl alcohol cannot be obtained by simple distillation of rectified spirit because

A) Rectified spirit does not contain ethanol
B) Percentage of ethanol in rectified spirit is very low
C) Ethanol forms an azeotropic mixture with water
D) Ethanol molecules are heavily hydrated

Q.54 Addition of bromine water to phenol yields
A) *o*-and *p*-Bromophenol
B) 2,4-Dibromophenol
C) *m*-Bromophenol
D) 2,4,6-Tribromophenol

Q.55 Cyanohydrin of which of the following will yield lactic acid
A) HCHO
B) CH_3CH_2CHO
C) CH_3COCH_3
D) CH_3CHO

Q.56 The additionof HCN to carbonyl compounds is an example of
A) Electrophilic addition
B) Nucleophilic substitution
C) Nucleophilic addition
D) Electrophilic substitution

Q.57 Which of the following will not give iodoform test
A) Ethanol
B) Pentan-3-one
C) Ethanal
D) Pentan-2-one

Q.58 Which of the followings is the strongest acid
A) $ClCH_2COOH$
B) Cl_3CCOOH
C) $Cl_2CHCOOH$
D) CH_3COOH

Q.59 Which of the following acids does not have a carboxyl group
A) Acetic acid
B) Aspirin
C) Benzoic acid
D) Picric acid

Q.60 Carboxylic acids are formed by oxidative cleavage of
A) Ketone
B) Aldehydes
C) Ethene
D) Both "A" and "C"

Q.61 Amino acid that has non-polar R group is
A) Lysine
B) Serine
C) Histidine
D) Methionine

Q.62 The amino acid containing two chiral carbons, is polar and essential
A) Valine
B) Threonine
C) Phenyl alanine
D) Isoleucine

Q.63 Which of the following amino acid contains secondary amino group and is non-essential and non-polar
A) Proline
B) Gultamine
C) Alanine
D) Isoleucine

Q.64 One of the following is acidic amino acid
A) Histidine
B) aspartic acid
C) proline
D) lysine

Q.65 In amino acid, proton is transferred from one group to another group and a dipolar ion produced, which is called
A) Carbonium ion
B) Zwitter ion
C) Oxonium ion
D) Hydroxonium ion

Q.66 Which of the following is optically inactive amino acid
A) Proline
B) Histidine
C) Lysine
D) Glycine

Q.67 Which steroid is obtained from fungi and yeast
A) Cholesterol
B) Phospholipids
C) Adrenal cortex
D) Ergosterol

Q.68 Which is found in the manufacture of food containers, cosmetic bottles, toys and packing materials
A) Polyester
B) Polyether
C) Polystyrene
D) Polyvinyl acetate

Q.69 Which statement is incorrect about cellulose
A) It is an unbranched polymer
B) It is mainly present in plant kingdom
C) It consists of glucose units up to 2500
D) β,1-6 linkages between glucose units

Q.70 Teflon, styrene and neoprene are all
A) Monomers
B) Homopolymers
C) Co-polymers
D) Condensation polymers

Q.71 Which of the following is not made of polyamides
A) Nylon
B) Wool
C) Natural silk
D) Artificial silk

Q.72 The number of chiral carbons in β-D- (+) -glucose
A) 3
B) 4
C) 5
D) 6

Q.73 Prills are _____pellets
A) Big and soft
B) Tiny and soft
C) Big and hard
D) Tiny and hard

Q.74 The solid waste management can be achieved by
A) Landfills
B) Incineration
C) Recycling
D) All of the above

Q.75 The number of gram molecules of oxygen in 6.02 X 10^{24} CO molecules is
A) 1g molecules
B) 5g molecules
C) 2g molecules
D) 8g molecules

Q.76 The total number of electrons in NH_2^- is
A) 8
B) 12
C) 10
D) 14

Q.77 Which of following has maximum vapour pressure
A) HF
B) HBr
C) HCl
D) HI

Q.78 The gas which has maximum root mean square velocity at room temperature
A) NH_3
B) CH_4
C) CO
D) NO

Q.79 All of the following are isotones of each other except
A) 15N7
B) $_{16}O^8$
C) 14C6
D) $_{14}N^7$

Q.80 Which of the following properties of aluminium chloride are related to the lack of an octet of electrons in the aluminium atom in this compound
A) Its tendency to dimerize
B) Its acidity in aqueous solution
C) Its covalent character
D) Its reaction with bases

Q.81 The type(s) of bonding present in a sample of sodium nitrated, $NaNO_3$, are
A) Covalent bonds only
B) Ionic bonds only
C) Ionic and metallic bonds
D) Covalent and ionic bonds and coordinate covalent

Q.82 Which one of the following statements about orbital hybridization is incorrect
A) The nitrogen atom in NH_3 is sp^3 hybridized
B) sp^2 hybrid orbitals are coplanar, and at 120° to each other
C) The carbon atom in CO_2 is sp^2 hybridized
D) sp hybrid orbitals lie at 180° to each other

Q.83 Which of the following statements is incorrect
A) Endothermic reactions cause cooling
B) Heat is a property of a system
C) There are some endothermic reactions that are spontaneous
D) Natural radio activity is a spontaneous process

Q.84 Given the following enthalpy changes
$I_2(g) + 3Cl_2(g) \rightarrow 2ICl_3(s)$ $\Delta H° = -214KJ$, $I_2(s) \rightarrow I_2(g)$, $\Delta H° = +38KJ/mol$
What is the standard enthalpy change of formation of ICl_3
A) +176KJ/mol
B) -88KJ/mol
C) +138KJ/mol
D) -138KJ/mol

Q.85 Molecular weight of a polymer can be best determined by measuring
A) Osmotic pressure of solution
B) Vapour pressure of solution
C) Boiling point of solution
D) Freezing point of solution

Q.86 2 g NaCl dissolved in 18g water has weight – weight percentage
A) 10%
B) 11.11%
C) 5%
D) 5.6%

Q.87 Which of the following statement is incorrect about electrochemical series

A) Strength of reducing agent decreases down the series
B) Reduction potential decreases down the series
C) Strength of oxidizing agent increases down the series
D) Non-metals at the top of the series are less reactive than at the bottom of the series

Q.88 The products of electrolysis of aqueous $NaNO_3$ are

A) Na and NO_2
B) H_2 and O_2
C) Na and O_2
D) H_2 and NO_2

Q.89 Which of the following element of IIA group produce hydrogen when reacts with an alkali

A) Be
B) Ca
C) Mg
D) Sr

Q.90 At 1000°C, the equilibrium constant for the reaction of carbon monoxide and oxygen to produce carbon dioxide is very large ($K_c = 1.2x10^{22}$). When the reaction is at equilibrium the

A) Concentration of carbon dioxide will be much larger than one or both reactants
B) Concentration of carbon dioxide will be much smaller than concentrations of both reactants
C) Concentration of carbon monoxide will be much larger than the concentration of carbon dioxide
D) Concentrations of both reactants must be much smaller than the concentration of carbon dioxide

Q.91 In a system at equilibrium, which of the following is not always true

A) There are both reactants and product present
B) The forward and reverse reactions occur at the same rate
C) The concentration of reactants and products are equal
D) The concentration of reactants and products remain same

Q.92 The following mechanism has been proposed for the reaction of NO with Br_2 to form NOBr

i) $NO_{(g)} + Br_{2(g)} \rightleftharpoons NOBr_{2\,(g)}$

ii) $NOBr_{2(g)} + NO_{(g)} \longrightarrow 2NOBr_{(g)}$

If the second step is the rate determining step, the order of the reaction with respect to NO

A) 1
B) 0
C) 3
D) 2

Q.93 The boiling points of H_2O, H_2S, H_2Se and H_2Te are in the following order

A) $H_2O > H_2S > H_2Se > H_2Te$
B) $H_2O > H_2Te > H_2Se > H_2S$
C) $H_2Te > H_2Se > H_2S > H_2O$
D) $H_2S > H_2O > H_2Te > H_2Se$

Q.94 A certain compound when burnt gives three oxides. The first turned lime water milky. The second turned anhydrous $CuSO_4$ blue and the third formed an aqueous solution of high pH. The elements present in the compound most probably are

A) C, O and S
B) C, H and Ca
C) C, H and Na
D) C, H and S

Q.95 The data given below is for the reaction of NO and $C1_2$ to form NOCl at 295 K

$[Cl_2]$	[NO]	Initial rate (mol/L/s)
0.05	0.05	$1x10^{-3}$
0.15	0.05	$3x10^{-3}$
0.05	0.15	$9x10^{-3}$

What is the rate law

A) $r = k\,[NO]\,[C1_2]$
B) $r = k\,[Cl_2]\,[NO]^3$
C) $r = k\,[Cl_2][NO]^2$
D) $r = k\,[Cl_2]$

Q.96 The property which is common in SiO_2 and CO_2 is

A) Both are macromolecules
B) Both are acidic
C) Both are solids
D) Both are polar

Q.97 Copper metal can be drawn into wires because

A) Its atoms are held together by true covalent bonds
B) It has unique electronic configuration
C) It has variable oxidation state
D) Its atoms are held together by non-directional metallic bonds

Q.98 The oxidation state of Pt in $[PtCl(NO_2)(NH_3)_4]SO_4$ is
A) 0
B) +2
C) +4
D) +6

Q.99 DAP contains P_2O_5
A) 46%
B) 75%
C) 48%
D) 33%

Q.100 Urea is obtained by dehydration of
A) Acetamide
B) Ammonium dihydrogen phosphate
C) Ammonium Carbonate
D) Ammonium carbamate

Q.101 All of the following contain nitrogen in simple form except
A) Proteins
B) Urea
C) Enzymes
D) Lipids

Q.102 Which of the following is not the property of good fertilizer
A) It is soluble in water
B) It is cheap to be prepared
C) It alter pH of the soil
D) It is not injurious to plants

ENGLISH

Directions: Choose the right option to complete the following sentences.

Q.103 Because he is so _____, we can never predict what course he will take at any moment.
A) incoherent B) superficial C) capricious D) deleterious

Q.104 Either the deer found in Rahim Yar Khan desert are comparatively small or the one I saw was____.
A) blemished B) famished C) reprimanded D) opulent

Q.105 An image trigger initiates the _____ of single or multiple frames of a digital camera by analyzing the signals of its sensor.
A) initiates B) captures C) rejects D) reciprocates

Q.106 Marilyn was a little too _____ when she gave her speech, and after 10 minutes the announcer finally had to cut her off so the program could proceed.
A) Loquacious B) Litigious C) Exorbitant D) Ornery

SPOT THE ERROR

In the first type of sentences, some segments of each sentence are underlined. Your task is to identify that underlined segment of the sentence, which contains the mistake that needs to be corrected.

Q.107 Books may also refer to work of literature, or a main division of such a work.
A) B) C) D)

Q.108 Mathematics is such important field and serves so many of the sciences that it is a prerequisite for studying every scientific discipline.
A) B) C) D)

Q.109 The patient blood's analysis shows that there is a big number of amorphous cells which are quiet unidentifiable.
A) B) C) D)

Q.110 They did not guess how closely he had kept in touch with across the road.
A B C D

Q.111 He cultivated the anthrax bacillus in such a way that they became only mildly poisonous.
A) B) C) D)

Q.112 The wonder to me is that how you get through this work.
A) B) C) D)

Directions:

In each question in the following, four alternative sentences are given. Choose the **CORRECT** one and fill the circle corresponding to that letter in the answer sheet.

Q.113 A) Nobody had succeeded in finding a remedy until Pasteur suggested collecting the eggs of moths.
B) Nobody had succeeded to find a remedy until Pasteur suggested collecting the eggs of moths.
C) Nobody had succeeded to find a remedy until Pasteur did not suggest to collect the eggs of moths.
D) Nobody had succeeded in finding a remedy until Pasteur suggested to collect the eggs of moths.

Q.114 A) Most of them have not and some of them will never find any serious interest in life.
B) Most of them have not founded and some of them never will any serious interest in life.
C) Most of them have not found and some of them will never find any serious interest in life.
D) Most of them has not found and some of them will never find any serious interest in life.

Q.115 A) If the college is alive to it's work of advice, such cases are caught.
B) If the college is alive to it's work of advice; such cases are caught.
C) If the college is alive to its work of advice, such cases are caught.
D) If the college is alive to its works of advice, such cases are caught.

Q.116 A) Pioneer men and women endured terrible hardships, and so do their children.
B) Pioneer men and women endure terrible hardships, and neither did the children.
C) Pioneer men and women endured terrible hardships, and also the childs.
D) Pioneer men and women endured terrible hardships, and so did their children.

Q.117 A) We expect help in providing adequate facilities and ample funds from everybody in order to advance this vital programme.
B) We expect help in the provision of adequate facilities and ample funds from everybody in order to advance this vital programme.
C) We expect help in providing adequate facilities and funds from everyone in order to advance this vital programme.
D) We expect help from everybody in providing adequate facilities and ample funds in order to advance this vital programme.

Q.118 A) My father walked to home five mile across the mountain.
B) My father walked home five miles across the mountain.
C) My father walked to home five mile along the mountain.
D) My father walk home five miles across the mountain.

Q.119 A) In rhetoric, the term "redundancy" tends to have negative connotations and may be perceived as improper because of it's use of duplicative or unnecessary wording.
B) In rhetoric, the term "redundancy" tends to have a negative connotation and may be perceived as improper because of it is in the use of duplicative or unnecessary wording.
C) In rhetoric, the term "redundancy" tends to have a negative connotation and may be perceived as improper because of its use of duplicative or unnecessary wording.
D) In rhetoric, the term "redundancy" tends to have a negative connotation and may be perceiving as improper because of it's use of duplicative or unnecessary wording.

Q.120 A) I will not object to his delivering the lecture as long as he is told not to make personal attacks of his critics.
B) I will not object to his delivering the lecture as long as he is told not to make personal attacks to his critics.
C) I will not object to his delivering the lecture as long as he is told not to make personal attacks his critics.
D) I will not object to his delivering the lecture as long as he is told not to make personal attacks on his critics.

Q.121 A) Forging trade have assumed greater importance in recent years.
B) Forging trade is assumed greater importance in recent years.
C) Forging trade has assumed greater importance in recent years.
D) Forging trade shall assumed greater importance in recent years.

Q.122 A) They tried to pacify him for kindness and affection.
B) They tried to pacify him in kindness and affection.
C) They tried to pacify him by kindness and affection.
D) They tried to pacify him with kindness and affection.

Directions:
In each of the following question, four alternative meanings of a word are given. You have to select the nearest correct meaning of the given word and fill the appropriate Bubble / Circle on the MCQ Response Form.

Q.123 BOWDLERIZE
A) mesmerize B) cynosure C) censure D) censor

Q.124 BRASSY
A) tasteful B) brainy C) modesty D) gaudy

Q.125 CATACOMB
A) aplomb B) crypt C) highway D) hinterland

Q.126 CHURN
A) freeze B) gurn C) over cast D) froth

Q.127 CATALYST
A) spur B) block C) fatalist D) pervasive

Q.128 CRASS
A) cross B) harass C) mindless D) ruthless

Q.129 CONTUSION
A) gush B) intuition C) contumely D) relaxation

Q.130 COQUETRY
A) dalliance B) pedantry C) customary D) gravity

Q.131 COMATOSE
A) animated B) greedy C) somnolent D) decompose

Q.132 COMPLACENT
A) considerate B) abject C) impatient D) hearty

BIOLOGY

Q.133 Which of the following is true for both RNA and DNA:
A) 5 carbon sugar is ribose
B) Single polynucleotide chain
C) Thymine is always paired with adenine
D) Phosphodiester linkages

Q.134 Study of conduction of nerve impulse in neuron is related to:
A) Pathology
B) Physiology
C) Parasitology
D) Palaeontology

Q.135 The part of the body which act as a unit and is composed of more types of tissues is called:
A) Organ
B) Organelle
C) Organ system
D) Cell

Q.136 Method to control all common diseases of a plant by using all relevant, appropriate methods of disease control is:
A) Pasteurization
B) Integrated disease management
C) Biological control
D) Genetic engineering

Q.137 Population of different species (plants and animals) living in the same habitat form a:
A) Community
B) Ecosystem
C) Biosphere
D) Niche

Q.138 Which of the following is not common in phosphatidic acid and phospholipids?
A) Two molecules of fatty acids
B) Glycerol
C) Nitrogenous base
D) Phosphate group

Q.139 Number of carbon atoms in the ring of ribofuranose is:
A) 6
B) 5
C) 4
D) 3

Q.140 Hydrolysis of sucrose yields:
A) Two molecules of glucose
B) Two molecules of fructose
C) One fructose and one galactose
D) One glucose and one fructose

Q.141 An activated enzyme consisting of polypeptide chain and a cofactor is known as:
A) Apoenzyme
B) Holoenzyme
C) Co-enzyme
D) Allosteric enzyme

Q.142 At very high temperature globular structure essential for enzyme activity is lost and the enzyme is said to be:
A) Activated
B) Poisoned
C) Denatured
D) Inhibited

Q.143 Which of the following enzyme works best in basic medium?
A) Catalase
B) Pepsin
C) Sucrase
D) Enterokinase

Q.144 Because of structural similarity with the substrate, competitive inhibitors may be selected by:
A) Active sites
B) Binding sites
C) Catalytic sites
D) Allosteric site

Q.145 The intake of liquid material by plasma membrane is termed as:
A) Endocytosis
B) Phagocytosis
C) Pinocytosis
D) Exocytosis

Q.146 _____ extract energy from different components of food and convert it into ATP:
A) Golgi complex
B) Ribosomes
C) Mitochondria
D) Peroxisomes

Q.147 Correct statement about Golgi complex is:
A) Inner convex surface is forming face
B) Outer convex surface is maturation face
C) Inner concave surface is forming face
D) Outer convex surface is forming face

Q.148 The peripheral granular area of nucleolus is composed of:
A) Large molecular weight RNA & rDNA
B) Low molecular weight RNA & rDNA
C) Low molecular weight rDNA only
D) Precursors of ribosomal subunits

Q.149 Which statement about Sarcoplasmic reticulum is not true
A) Store large number of Ca^{++}
B) Involved in the synthesis of protein
C) Consists of cisternae
D) Responsible for transmission of impulses

Q.150 Bivalents can be observed in a cell during all of following phases except:
A) Leptotene
B) Zygotene
C) Pachytene
D) Diplotene

Q.151 The most critical phase of mitosis is:
A) Prophase
B) Metaphase
C) Anaphase
D) Telophase

Q.152 Frequency of abortions in Edward's syndrome is:
A) 1/40
B) 1/33
C) 1/200
D) 1/1000

Q.153 Only one X chromosome is present in:
A) Jacob's syndrome
B) Klinefelter's syndrome
C) Metafemale
D) Patau female

Q.154 Pairing of homologous chromosome is called:
A) Synapsis
B) Chiasmata formation
C) Crossing over
D) Gene linkage

Q.155 Arrange the position of cell wall, cell membrane ,slime and capsule from exterior to interior surface in bacterial cell:
A) Cell wall → capsule → slime → cell membrane
B) Slime → capsule → cell wall → cell membrane
C) Capsule → slime → cell wall → cell membrane
D) Cell wall → cell membrane → slime → capsule

Q.156 Misuse of which antibiotic causes allergic reaction:
A) Tetracycline
B) Penicillin
C) Streptomycin
D) None of these

Q.157 The word bacteriophage means:
A) Affinity with bacteria
B) Attachment with bacteria
C) Mutant bacteria
D) Bacteria eater

Q.158 Which of the following drug obtained from a soil fungus:
A) Griseofulvin
B) Lovastatin
C) Ergotin
D) Cyclosporine

Q.159 The drug senna is used as base for:
A) Antihypertensive
B) Antibiotic
C) Antiallergic
D) Lexative

Q.160 The scientific name of egg plant is:
A) *Solanum melangena*
B) *Solanum tuberosum*
C) *Solanum nigrum*
D) *Lycopersicum esculentum*

Q.161 All of following are methods of disinfestation of tape worm except:
A) Use of anema
B) Using penicillin
C) Use of medicines
D) None of these

Q.162 One which produces a anticoagulant on wounds to prevent blood clotting:
A) *Ascaris lumbericoides*
B) *Enterobius vermicularis*
C) *Ancyclostoma duodenale*
D) *Taenia solium*

Q.163 Which of the following is the causative agent of sleeping sickness?
A) Tsetse fly
B) *Trypanosoma*
C) *Plasmodium*
D) Mosquito

Q.164 Burning sensation in the chest usually associated with the back flush of acidic chyme into esophagus is known as:
A) Pyrosis
B) Pylorus
C) Hunger pang
D) Peristalsis

Q.165 The length of jejunum is:
A) Less than duodenum
B) More than ileum
C) Less than large intestine
D) Less than ileum

Q.166 The color of bile is:
A) Golden
B) Yellow
C) Green
D) Brown

Q.167 If bile pigments are prevented from leaving digestive tract they may accumulate in blood causing a condition known as:
A) Gall stone
B) Jaundice
C) Hepatitis
D) Hepatomegaly

Q.168 Part of respiratory tract that is not lined with mucous membrane:
A) Nasal cavities
B) Glottis
C) Alveolar sacs
D) Pharynx

Q.169 Lungs are placed in:
A) Pleural cavity
B) Chest cavity
C) Thoracic cavity
D) All A,B,C

Q.170 Which of the following is incorrect about erythrocytes?
A) Once mature do not divide
B) Biconvex and have elastic plasma membrane
C) Formed in red bone marrow
D) These are anucleated cells

Q.171 The pressure within capillaries causes a continuous leakage of fluid from the blood plasma into the spaces that surround the capillaries and tissue. This fluid is known as:
A) Lymph
B) Intracellular Fluid
C) Interstitial fluid
D) Serum

Q.172 Which of the following statement is true?
A) Thin loop of Henle does not allow out flow of water
B) Descending loop of Henle allow out flow of sodium
C) Ascending limb actively transport Na^+ ions
D) Aldosterone acts on collecting ducts

Q.173 This is a part of blood vessels associated with nephron:
A) Collecting ducts
B) Pyramids
C) Glomerulus
D) Bowman's capsule

Q.174 Excessive use of green vegetables and tomatoes may be the source of:
A) Hyperoxaluria
B) Hypercalcemia
C) Hyperglycemia
D) Hyperuremia

Q.175 Method used to remove excess urea from blood in case of kidney failure:
A) Dialysis
B) Lithotripsy
C) Uremia
D) Surgery

Q.176 In peritoneal dialysis, peritoneal cavity is filled with dialysis fluid that is introduced into the body through:
A) Vein
B) Catheter
C) Shunt vein
D) Urethra

Q.177 L-dopa is used in:
A) Parkinson's disease
B) Epilepsy
C) Alzheimer's disease
D) Neurosis

Q.178 Amygdala is a part of:
A) Fore brain
B) Mid brain
C) Hindbrain
D) Spinal cord

Q.179 Which division of nervous system prepares the body for stressful and energetic activity like "fight or flight"?
A) Autonomic nervous system
B) Parasympathetic nervous system
C) Sympathetic nervous system
D) Peripheral nervous system

Q.180 Brain is not protected by:
A) Cranium
B) Neural arches
C) CSF
D) Meanings

Q.181 Best phase to count number of chromosomes in a diploid cell is:
A) Metaphase
B) Prophase
C) Telophase
D) Interphase

Q.182 Development of male characteristics in body of female is due to excess of:
A) Oestrogen
B) Progesterone
C) Androgens
D) Oxytocin

Q.183 LH secretion is increased by increase in:
A) FSH
B) Progesterone
C) Estrogen
D) Oxytocin

Q.184 Following twins are exactly similar to their parents
A) Identical
B) Fraternal
C) Maternal
D) None of these

Q.185 Formation of ovum in the ovaries is termed as:
A) Ovulation
B) Oogenesis
C) Oviparous
D) Viviparous

Q.186 Darkening of skin is symptom of:
A) Cushing's disease
B) Grave's disease
C) Addison's disease
D) Parkinson's disease

Q.187 Protein is the chemical nature of:
A) Thyroxin
B) Cortisone
C) Epinephrine
D) Glucagon

Q.188 Secretion of endocrine glands are transported via _____ to target cell:
A) Lymph
B) **Blood**
C) Neurons
D) Duct

Q.189 Hypophysis cerebri is connected to brain by a short stalk known as:
A) Reticular formation
B) Limbic system
C) Corpus callosum
D) Infundibulum

Q.190 Formation of ABO system antibodies in serum is an example of:
A) Natural active immunity
B) Natural passive immunity
C) Artificial active immunity
D) Artificial passive immunity

Q.191 Which of the following type of immune response develops in infant due to mother feed in early age?
A) Active
B) Passive
C) Cell mediated
D) Humoral

Q.192 The capacity to recognize the intrusion of any material foreign to the body and to mobilize cells and cell products to help to remove the particular sort of foreign material with greater speed is called:
A) Vaccination
B) Immunity
C) Homeostasis
D) Physical barriers

Q.193 Immunity developed by anti-tetanus injection is:

A) Passive
B) Active
C) Cell mediated
D) Natural

Q.194 Antibodies are manufactured in:
A) T-lymphocytes
B) B-lymphocytes
C) Plasma cells
D) Memory cells

Q.195 Which one of the following bone forms joint with 1st vertebra of vertebral column:
A) Maxilla
B) Occipital
C) Temporal
D) Palatine

Q.196 During contraction of muscles which of the following does not decrease?
A) I-band
B) H-zone
C) Length of sarcomere
D) A -band

Q.197 Human and mammalian skeleton can be divided into two parts, axial skeleton and:
A) Appendicular skeleton
B) Exoskeleton
C) Endoskeleton
D) Hydrostatic skeleton

Q.198 A muscular disease caused by hormonal disturbance is:
A) Cramp
B) Tetany
C) Muscles fatigue
D) Tetanus

Q.199 During _____, a balloon catheter is sometimes used to open up a closed artery
A) Angioplasty
B) Gene therapy
C) Bypass operation
D) Vascular endothelial growth

Q.200 Organoids can be implanted in the abdominal cavity to cure:
A) Syphilis
B) Genital herpes
C) Hemophilia
D) Epilepsy

Q.201 Function of H gene on chromosomal pair 19 is to:
A) Convert substance H into an enzyme
B) Insertion of antigen on RBCs surface
C) Convert a precursor into substance H
D) Production of Bombay phenotype

Q.202 Large quantity of gene or protein product can be obtained by:
A) Genetic engineering
B) Gene cloning
C) PCR
D) Cannot produced together

Q.203 Natural extra chromosomal circular DNA molecules of bacteria are:
A) Endonuclease
B) Plasmid
C) Nucleoid
D) Nucleochromatin

Q.204 Plasmids was discovered in _____ bacteria:
A) *E.coli*
B) *H.influenzae*
C) Yeast
D) *Pseudomonas*

Q.205 Number of reduced NAD^+ produced during glycolysis are:
A) 2
B) 4
C) 6
D) 8

Q.206 In citric acid cycle oxidation of succinate produces:
A) FAD
B) FAD & Fumarate
C) FADH & Fumarate
D) Only FADH

Q.207 Which one of the following is a 5carbon compound?
A) ∝-Ketoglutarate
B) Citrate
C) Succinate
D) Oxaloacetate

Q.208 If a couple has four children, all with different types of ABO blood groups, parental blood groups should be:
A) AB and O
B) A and B
C) AB and AB
D) O and B

Q.209 Number of ATP produced by one reduced FAD is:
A) 1
B) 2
C) 3
D) 4

Q.210 Oldest known fossils are of:
A) Eukaryotes
B) Prokaryote
C) Cyanobacteria
D) Fungi

Q.211 Organs structurally different but functionally alike are:
A) Homologous
C) Vestigial

B) Analogous

D) Essential

Q.212 The development of antibiotic resistance in bacteria is an example of:

A) Random selection
B) Natural selection
C) Artificial selection
D) Sexual selection

Q.213 Intimate close relationship between members of two different species is termed as

A) Symbiosis
B) Mutualism
C) Commensalism
D) Parasitism

Q.214 Incorrect statement about niche is

A) It also includes physical factors of environment
B) Refers to only behavioral influence of species
C) Job/Profession of species is an ecosystem
D) First proposed by Joseph Grinell

Q.215 In pure form, colour of ozone is:

A) Greyish
B) Bluish
C) Reddish
D) Black

Q.216 Which of the following occurs due to the deficiency of vitamin C?

A) Scurvy
B) Beriberi
C) Kwashiorker
D) Anemia

Q.217 An environmental buffer is:

A) Ecosystem
B) Lithosphere
C) Environment
D) Forest

Q.218 All of following air pollutants can cause headache and brain damage except:

A) Carbon monoxide
B) Lead compounds
C) Oxides of nitrogen
D) Sulphur dioxide

Q.219 Green colour blindness is known as:

A) Tritanopia
B) Protanopia
C) Deuteranopia
D) Monochromacy

Q.220 For X-linked traits males are

A) Homozygous
B) Heterozygous
C) Hemizygous
D) Homogametic